In the claims:

Please amend the claims as follows:

1. **(Currently Amended)** A targeted oligonucleotide construct comprising: a targeting moiety which localizes to a site in an organism; an oligonucleotide that is an antisense oligonucleotide or an antisense oligonucleotide analog that is modified to enhance its efficacy, pharmacokinetic properties, or physical properties~~oligonucleotide complementary to a nucleic acid of interest~~; and an imaging agent suitable for use in Positron Emission Tomography (PET), Single Photon Emission Tomography (SPECT) or Magnetic Resonance Imaging (MRI), wherein the targeting moiety is selected from an antibody, a lectin, a ligand, a sugar, a steroid, a hormone, a nutrient, a small molecule and a protein, and wherein said targeted oligonucleotide construct has essentially no ability to cross the blood/brain barrier.

2. **(Previously Presented)** A targeted oligonucleotide construct as in claim 1, wherein said imaging agent is selected from the group consisting of: an unpaired spin atom, a free radical, a paramagnetic contrast agent and a metal chelate.

3. **(Previously Presented)** A targeted oligonucleotide construct as in claim 1, wherein said imaging agent is a paramagnetic contrast agent selected from the group consisting of: gadolinium, cobalt, nickel, manganese, and iron.

4. **(Canceled)**

5. **(Previously Presented)** A targeted oligonucleotide construct as in claim 1, wherein said imaging agent is a radiolabel selected from the group consisting of: ^{131}I, ^{123}I , ^{99m}Tc, ^{18}F, ^{68}Ga, ^{67}Ga, ^{72}As, ^{89}Zr, ^{64}Cu, ^{62}Cu, ^{111}In, ^{203}Pb, ^{198}Hg, ^{11}C, ^{97}Ru, and ^{201}Tl.

6. **(Previously Presented)** A targeted oligonucleotide construct as in claim 5, wherein the radiolabel is a chelate.

7. **(Previously Presented)** A targeted oligonucleotide construct as in claim 1, wherein said imaging agent is an iron, lanthanide or gadolinium unpaired spin atom or free radical.

8. **(Previously Presented)** A targeted oligonucleotide construct as in claim 1, further comprising a therapeutic agent.

9. **(Canceled)**

10. **(Previously Presented)** A targeted oligonucleotide construct as in claim 8, wherein the therapeutic agent is selected from an enzyme, an enzyme inhibitor, a receptor ligand, a radioisotope, an antibiotic, a steroid, a hormone, a polypeptide, a glycopeptide, a phospholipid, and a drug.

Claims 11-24 **(Canceled)**

25. **(Previously Presented)** A targeted oligonucleotide construct as in claim 14, wherein the oligonucleotide is an antisense oligonucleotide analog that is selected from the group consisting of: an antisense oligonucleotide that is modified with a cell uptake facilitating moiety, an antisense oligonucleotide that is modified with a stabilizing moiety, an antisense oligonucleotide that is modified to enhance its solubility, and an antisense oligonucleotide that is modified to enhance its resistance to nuclease digestion.

26. **(Previously Presented)** A targeted oligonucleotide construct as in claim 14, wherein the oligonucleotide is an antisense oligonucleotide analog derivatized with a moiety selected from the group consisting of: biotin, amino glycoside, lipophilic, phosphorothioate, morpholino and deoxy.

27. **(Previously Presented)** A targeted oligonucleotide construct as in claim 14, wherein the oligonucleotide is an antisense oligonucleotide analog derivatized with a phosphorothioate moiety.

28. **(Previously Presented)** A targeted oligonucleotide construct as in claim 14, wherein the oligonucleotide is an antisense oligonucleotide or an antisense oligonucleotide analog that is specific to mRNA.

29. **(Previously Presented)** A targeted oligonucleotide construct as in claim 14, wherein the oligonucleotide is an antisense oligonucleotide or an antisense oligonucleotide analog that is specific to a gene selected from the group consisting of : C-myb, N-myc, C-myc and PSA gene specific antisense.

30. **(Previously Presented)** A targeted oligonucleotide construct as in claim ~~8~~11, wherein the oligonucleotide is an antisense oligonucleotide analog that is selected from the group consisting of: an antisense oligonucleotide that is modified with a cell uptake facilitating moiety, an antisense oligonucleotide that is modified with

a stabilizing moiety, an antisense oligonucleotide that is modified to enhance its solubility, and an antisense oligonucleotide that is modified to enhance its resistance to nuclease digestion.

31. **(Previously Presented)** A targeted oligonucleotide construct as in claim ~~8~~11, wherein the oligonucleotide is an antisense oligonucleotide analog derivatized with a moiety selected from the group consisting of: biotin, amino glycoside, lipophilic, phosphorothioate, morpholino and deoxy.

32. **(Previously Presented)** A targeted oligonucleotide construct as in claim ~~8~~11, wherein the oligonucleotide is an antisense oligonucleotide analog derivatized with a phosphorothioate group.

33. **(Previously Presented)** A targeted oligonucleotide construct as in claim ~~8~~11, wherein the oligonucleotide is an antisense oligonucleotide or an antisense oligonucleotide analog that is specific to a gene selected from the group consisting of : C-myb, N-myc, C-myc and PSA gene specific antisense.

34. **(Previously Presented)** A targeted oligonucleotide construct as in claim ~~8~~11, wherein the oligonucleotide is an antisense oligonucleotide or an antisense oligonucleotide analog that is specific to mRNA.